



SEQUENCE LISTING

<110> THOMPSON, Catherine C.

<120> HUMAN HAIRLESS GENE AND PROTEIN

<130> Thompson-20263/0243435

<140> US 09/not assigned

<141> 1999-04-07

<150> US 60/080,888

<151> 1998-04-07

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<170> PatentIn Ver. 2.0

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RECEIVED

APR 26 2002

TECH CENTER 1600/2900

RECEIVED
APR 25 2002
TC 1700

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 Gln Glu Pro Gln Pro Cys Pro Arg Arg Gly Phe His Leu Phe Gln Glu
 850 855 860
 His Trp Arg Gln Gly Gln Pro Val Leu Val Ser Gly Ile Gln Arg Thr
 865 870 875 880
 Leu Gln Gly Asn Leu Trp Gly Thr Glu Ala Leu Gly Ala Leu Gly Gly
 885 890 895
 Gln Val Gln Ala Leu Ser Pro Leu Gly Pro Pro Gln Pro Ser Ser Leu
 900 905 910
 Gly Ser Thr Thr Phe Trp Glu Gly Phe Ser Trp Pro Glu Leu Arg Pro
 915 920 925
 Lys Ser Asp Glu Gly Ser Val Leu Leu Leu His Arg Ala Leu Gly Asp
 930 935 940
 Glu Asp Thr Ser Arg Val Glu Asn Leu Ala Ala Ser Leu Pro Leu Pro
 945 950 955 960
 Glu Tyr Cys Ala Leu His Gly Lys Leu Asn Leu Ala Ser Tyr Leu Pro
 965 970 975
 Pro Gly Leu Ala Leu Arg Pro Leu Glu Pro Gln Leu Trp Ala Ala Tyr
 980 985 990
 Gly Val Ser Pro His Arg Gly His Leu Gly Thr Lys Asn Leu Cys Val
 995 1000 1005
 Glu Val Ala Asp Leu Val Ser Ile Leu Val His Ala Asp Thr Pro Leu
 1010 1015 1020
 Pro Ala Trp His Arg Ala Gln Lys Asp Phe Leu Ser Gly Leu Asp Gly
 1025 1030 1035 1040
 Glu Gly Leu Trp Ser Pro Gly Ser Gln Val Ser Thr Val Trp His Val
 1045 1050 1055
 Phe Arg Ala Gln Asp Ala Gln Arg Ile Arg Arg Phe Leu Gln Met Val
 1060 1065 1070
 Cys Pro Ala Gly Ala Gly Ala Leu Glu Pro Gly Ala Pro Gly Ser Cys
 1075 1080 1085
 Tyr Leu Asp Ala Gly Leu Arg Arg Arg Leu Arg Glu Glu Trp Gly Val
 1090 1095 1100
 Ser Cys Trp Thr Leu Leu Gln Ala Pro Gly Glu Ala Val Leu Val Pro
 1105 1110 1115 1120
 Ala Gly Ala Pro His Gln Val Gln Gly Leu Val Ser Thr Val Ser Val
 1125 1130 1135

Thr Gln His Phe Leu Ser Pro Glu Thr Ser Ala Leu Ser Ala Gln Leu
1140 1145 1150

Cys His Gln Gly Pro Ser Leu Pro Pro Asp Cys His Leu Leu Tyr Ala
1155 1160 1165

Gln Met Asp Trp Ala Val Phe Gln Ala Val Lys Val Ala Val Gly Thr
1170 1175 1180

Leu Gln Glu Ala Lys
1185

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<211> 1207
<212> PRT
<213> Rat

<400> 5
Met Gly Leu Arg Ser Ser Cys Phe Val Leu Thr Leu Gln Asp Pro Pro
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Leu Gly Glu Pro His Glu Gly Arg Arg Val Met Glu Ser Met Pro Ser
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Phe Leu Lys Asp Thr Pro Ala Trp Glu Lys Thr Ala Pro Val Asn Gly
35 40 45

Ile Val Gly Gln Glu Pro Gly Thr Ser Pro Gln Asp Gly Leu His His
50 55 60

Gly Ala Leu Cys Leu Gly Glu Pro Val Pro Phe Trp Arg Gly Val Leu
65 70 75 80

Ser Ala Pro Asp Ser Trp Leu Pro Pro Gly Phe Leu Gln Gly Pro Lys
85 90 95

Asp Thr Leu Ser Val Val Glu Gly Glu Gly Ser Arg Asn Gly Glu Arg
100 105 110

Lys Ala Asn Trp Leu Gly Ser Lys Glu Gly Leu Arg Trp Lys Glu Ala
115 120 125

Met Leu Ala His Pro Leu Ala Phe Cys Gly Pro Ala Cys Pro Pro Arg
130 135 140

Tyr Gly Pro Leu Ile Pro Glu His Ser Ser Gly His Pro Lys Ser Asp
145 150 155 160

Pro Val Ala Phe Arg Pro Leu His Cys Pro Phe Leu Leu Glu Thr Lys
165 170 175

Ile Leu Glu Arg Ala Pro Phe Trp Val Pro Thr Cys Leu Pro Pro Tyr
180 185 190

Leu Met Ser Ser Leu Pro Pro Glu Arg Ser Tyr Asp Trp Pro Leu Ala
195 200 205

Pro Ser Pro Trp Val Tyr Ser Gly Ser Gln Pro Lys Val Pro Ser Ala
210 215 220

Phe Ser Leu Gly Ser Lys Gly Phe Tyr His Lys Asp Pro Asn Ile Leu
225 230 235 240
Arg Pro Ala Lys Glu Pro Leu Ala Ala Ser Glu Ser Gly Met Leu Gly
245 250 255
Leu Ala Pro Gly Gly His Leu Gln Gln Ala Cys Asp Ala Glu Gly Pro
260 265 270
Ser Leu His Gln Arg Asp Gly Glu Thr Gly Ala Gly Arg Gln Gln Asn
275 280 285
Leu Cys Pro Val Phe Leu Gly Tyr Pro Asp Thr Val Pro Arg Thr Pro
290 295 300
Trp Pro Ser Cys Pro Pro Gly Leu Val His Thr Leu Gly Asn Val Trp
305 310 315 320
Ala Gly Pro Gly Ser Asn Ser Phe Gly Tyr Gln Leu Gly Pro Pro Val
325 330 335
Thr Pro Arg Cys Pro Ser Pro Gly Pro Pro Thr Pro Pro Gly Gly Cys
340 345 350
Cys Ser Ser His Leu Pro Ala Arg Glu Gly Asp Pro Gly Pro Cys Arg
355 360 365
Lys Cys Gln Asp Ser Pro Glu Gly Ser Ser Ser Gly Pro Gly Glu Ser
370 375 380
Ser Glu Glu Arg Asn Lys Ala Gly Ser Arg Ala Ser Pro Pro Ser His
385 390 395 400
His Thr Lys Leu Lys Lys Thr Trp Leu Thr Arg His Ser Glu Gln Phe
405 410 415
Glu Cys Pro Gly Gly Cys Pro Gly Lys Gly Glu Ser Pro Ala Thr Gly
420 425 430
Leu Arg Ala Leu Lys Arg Ala Gly Ser Pro Glu Val Gln Gly Ala Arg
435 440 445
Gly Pro Ala Pro Lys Arg Pro Ser His Thr Phe Pro Gly Thr Gly Arg
450 455 460
Gln Gly Ala Arg Ala Trp Gln Glu Thr Pro Glu Thr Ser Thr Gly Ser
465 470 475 480
Lys Ala Glu Ala Gln Gln Gln Glu Glu Gln Arg Gly Pro Arg Asp Gly
485 490 495
Arg Ile Arg Leu Arg Glu Ser Arg Leu Glu Asp Thr Ser Cys Gln His
500 505 510
His Leu Ala Gly Val Thr Gln Cys Pro Ser Cys Val Gln Ala Ala Gly
515 520 525
Glu Val Glu Ile Leu Thr Ser His Ser Gln Lys Ser His Lys Leu Pro
530 535 540

Leu Glu Glu Lys Pro Leu Glu Glu Asp Ser Cys Ala Thr Ser Glu Glu
 545 550 555 560
 Gly Gly Gly Ser Ser Pro Glu Ala Ser Ile Asn Lys Gly Leu Ala Lys
 565 570 575
 His Leu Leu Ser Gly Leu Gly Asp Arg Leu Cys Arg Leu Leu Arg Lys
 580 585 590
 Glu Arg Glu Ala Leu Ala Trp Ala Gln Arg Glu Gly Gln Gly Pro Ala
 595 600 605
 Met Thr Glu Asp Ser Pro Gly Ile Pro His Cys Cys Ser Arg Cys His
 610 615 620
 His Gly Leu Phe Asn Thr His Trp Arg Cys Ser His Cys Ser His Arg
 625 630 635 640
 Leu Cys Val Ala Cys Gly Arg Ile Ala Gly Ala Gly Lys Asn Arg Glu
 645 650 655
 Lys Thr Gly Ser Arg Glu Gln Arg Thr Asp Asp Cys Ala Gln Glu Ala
 660 665 670
 Gly His Ala Ala Cys Ser Leu Ile Leu Thr Gln Phe Val Ser Ser Gln
 675 680 685
 Ala Leu Ala Glu Leu Ser Thr Val Met His Gln Val Trp Ala Lys Phe
 690 695 700
 Asp Ile Arg Gly His Cys Phe Cys Gln Val Asp Ala Arg Val Trp Ala
 705 710 715 720
 Pro Gly Asp Gly Gly Gln Gln Lys Glu Pro Thr Glu Lys Thr Pro Pro
 725 730 735
 Ala Pro Gln Leu Ser Cys Asn Gly Asp Ser Asn Arg Thr Lys Asp Ile
 740 745 750
 Lys Glu Glu Thr Pro Asp Ser Thr Glu Ser Pro Ala Glu Asp Arg Ala
 755 760 765
 Gly Arg Ser Pro Leu Pro Cys Pro Ser Leu Cys Glu Leu Leu Ala Ser
 770 775 780
 Thr Ala Val Lys Leu Cys Leu Gly His Glu Arg Ile His Met Ala Phe
 785 790 795 800
 Ala Pro Val Thr Pro Ala Leu Pro Ser Asp Asp Arg Ile Thr Asn Ile
 805 810 815
 Leu Asp Ser Ile Ile Ala Gln Val Val Glu Arg Lys Ile Gln Glu Lys
 820 825 830
 Ala Leu Gly Pro Gly Leu Arg Ala Gly Ser Gly Leu Arg Lys Gly Leu
 835 840 845
 Ser Leu Pro Leu Ser Pro Val Arg Thr Gln Leu Ser Pro Pro Gly Ala
 850 855 860

Leu Leu Trp Leu Gln Glu Pro Arg Pro Lys His Gly Phe Arg Leu Phe
 865 870 875 880
 Gln Glu His Trp Arg Gln Gly Gln Pro Val Leu Val Ser Gly Ile Gln
 885 890 895
 Lys Thr Leu Arg Leu Ser Leu Trp Gly Met Glu Ala Leu Gly Thr Leu
 900 905 910
 Gly Gly Gln Val Gln Thr Leu Thr Ala Leu Gly Pro Pro Gln Pro Thr
 915 920 925
 Ser Leu Asp Ser Thr Ala Phe Trp Lys Gly Phe Ser His Pro Glu Ala
 930 935 940
 Arg Pro Lys Leu Asp Glu Gly Ser Val Leu Leu Leu His Arg Pro Leu
 945 950 955 960
 Gly Asp Lys Asp Glu Ser Arg Val Glu Asn Leu Ala Ser Ser Leu Pro
 965 970 975
 Leu Pro Glu Tyr Cys Ala His Gln Gly Lys Leu Asn Leu Ala Ser Tyr
 980 985 990
 Leu Pro Leu Gly Leu Thr Leu His Pro Leu Glu Pro Gln Leu Trp Ala
 995 1000 1005
 Ala Tyr Gly Val Asn Ser His Arg Gly His Leu Gly Thr Lys Asn Leu
 1010 1015 1020
 Cys Val Glu Val Ser Asp Leu Ile Ser Ile Leu Val His Ala Glu Ala
 1025 1030 1035 1040
 Gln Leu Pro Pro Trp Tyr Arg Ala Gln Lys Asp Phe Leu Ser Gly Leu
 1045 1050 1055
 Asp Gly Glu Gly Leu Trp Ser Pro Gly Ser Gln Thr Ser Thr Val Trp
 1060 1065 1070
 His Val Phe Arg Ala Gln Asp Ala Gln Arg Ile Arg Arg Phe Leu Gln
 1075 1080 1085
 Met Val Cys Pro Ala Gly Ala Gly Thr Leu Glu Pro Gly Ala Pro Gly
 1090 1095 1100
 Ser Cys Tyr Leu Asp Ser Gly Leu Arg Arg Arg Leu Arg Glu Glu Trp
 1105 1110 1115 1120
 Gly Val Ser Cys Trp Thr Leu Leu Gln Ala Pro Gly Glu Ala Val Leu
 1125 1130 1135
 Val Pro Ala Gly Ala Pro His Gln Val Gln Gly Leu Val Ser Thr Ile
 1140 1145 1150
 Ser Val Thr Gln His Phe Leu Ser Pro Glu Thr Ser Ala Leu Ser Ala
 1155 1160 1165
 Gln Leu Cys His Gln Gly Ala Ser Leu Pro Pro Asp His Arg Met Leu
 1170 1175 1180

Tyr Ala Gln Met Asp Arg Ala Val Phe Gln Ala Val Lys Val Ala Val
 1185 1190 1195 1200

Gly Thr Leu Gln Glu Ala Lys
 1205

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 <212> PRT
 <213> Mouse

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 Gln Asp Gly Leu Arg His Gly Ala Leu Cys Leu Gly Glu Pro Ala Pro
 35 40 45
 Phe Trp Arg Gly Val Leu Ser Thr Pro Asp Ser Trp Leu Pro Pro Gly
 50 55 60
 Phe Leu Gln Gly Pro Lys Asp Thr Leu Ser Leu Val Glu Gly Glu Gly
 65 70 75 80
 Pro Arg Asn Gly Glu Arg Lys Gly Ser Trp Leu Gly Gly Lys Glu Gly
 85 90 95
 Leu Arg Trp Lys Glu Ala Met Leu Ala His Pro Leu Ala Phe Cys Gly
 100 105 110
 Pro Ala Cys Pro Pro Arg Tyr Gly Pro Leu Ile Pro Glu His Ser Gly
 115 120 125
 Gly His Pro Lys Ser Asp Pro Val Ala Phe Arg Pro Leu His Cys Pro
 130 135 140
 Phe Leu Leu Glu Thr Lys Ile Leu Glu Arg Ala Pro Phe Trp Val Pro
 145 150 155 160
 Thr Cys Leu Pro Pro Tyr Leu Met Ser Ser Leu Pro Pro Glu Arg Pro
 165 170 175
 Tyr Asp Trp Pro Leu Ala Pro Asn Pro Trp Val Tyr Ser Gly Ser Gln
 180 185 190
 Pro Lys Val Pro Ser Ala Phe Gly Leu Gly Ser Lys Gly Phe Tyr His
 195 200 205
 Lys Asp Pro Asn Ile Leu Arg Pro Ala Lys Glu Pro Leu Ala Glu Ser
 210 215 220
 Gly Met Leu Gly Leu Ala Pro Gly Gly His Leu Gln Gln Ala Cys Glu
 225 230 235 240
 Ser Glu Gly Pro Ser Leu His Gln Arg Asp Gly Glu Thr Gly Ala Gly
 245 250 255

Arg Gln Gln Asn Leu Cys Pro Val Phe Leu Gly Tyr Pro Asp Thr Val
 260 265 270
 Pro Arg Ala Pro Trp Pro Ser Cys Pro Pro Gly Leu Val His Ser Leu
 275 280 285
 Gly Asn Ile Trp Ala Gly Pro Gly Ser Asn Ser Leu Gly Tyr Gln Leu
 290 295 300
 Gly Pro Pro Ala Thr Pro Arg Cys Pro Ser Pro Gly Pro Pro Thr Pro
 305 310 315 320
 Pro Gly Gly Cys Cys Ser Ser His Leu Pro Ala Arg Glu Gly Asp Leu
 325 330 335
 Gly Pro Cys Arg Lys Cys Gln Asp Ser Pro Glu Gly Gly Ser Ser Gly
 340 345 350
 Pro Gly Glu Ser Ser Glu Glu Arg Asn Lys Ala Asp Ser Arg Ala Cys
 355 360 365
 Pro Pro Ser His His Thr Lys Leu Lys Lys Thr Trp Leu Thr Arg His
 370 375 380
 Ser Glu Gln Phe Glu Cys Pro Gly Gly Cys Ser Gly Lys Glu Glu Ser
 385 390 395 400
 Ser Ala Thr Gly Leu Arg Ala Leu Lys Arg Ala Gly Ser Pro Glu Val
 405 410 415
 Gln Gly Ala Ser Arg Gly Pro Ala Pro Lys Arg Pro Ser His Pro Phe
 420 425 430
 Pro Gly Thr Gly Arg Gln Gly Ala Arg Ala Trp Gln Glu Thr Pro Glu
 435 440 445
 Thr Ile Ile Gly Ser Lys Ala Glu Ala Glu Gln Gln Glu Glu Gln Arg
 450 455 460
 Gly Pro Arg Asp Gly Arg Ile Arg Leu Gln Glu Ser Arg Leu Val Asp
 465 470 475 480
 Thr Ser Cys Gln His His Leu Ala Gly Val Thr Gln Cys Gln Ser Cys
 485 490 495
 Val Gln Ala Ala Gly Glu Val Gly Val Leu Thr Gly His Ser Gln Lys
 500 505 510
 Ser Arg Arg Ser Pro Leu Glu Glu Lys Gln Leu Glu Glu Glu Asp Ser
 515 520 525
 Ser Ala Thr Ser Glu Glu Gly Gly Gly Gly Pro Gly Pro Glu Ala Ser
 530 535 540
 Leu Asn Lys Gly Leu Ala Lys His Leu Leu Ser Gly Leu Gly Asp Arg
 545 550 555 560
 Leu Cys Arg Leu Leu Arg Lys Glu Arg Glu Ala Leu Ala Trp Ala Gln
 565 570 575

Arg Glu Gly Gln Gly Pro Ala Met Thr Glu Asp Ser Pro Gly Ile Pro
 580 585 590
 His Cys Cys Ser Arg Cys His His Gly Leu Phe Asn Thr His Trp Arg
 595 600 605
 Cys Ser His Cys Ser His Arg Leu Cys Val Ala Cys Gly Arg Ile Ala
 610 615 620
 Gly Ala Gly Lys Asn Arg Glu Lys Thr Gly Ser Gln Glu Gln His Thr
 625 630 635 640
 Asp Asp Cys Ala Gln Glu Ala Gly His Ala Ala Cys Ser Leu Ile Leu
 645 650 655
 Thr Gln Phe Val Ser Ser Gln Ala Leu Ala Glu Leu Ser Thr Val Met
 660 665 670
 His Gln Val Trp Ala Lys Phe Asp Ile Arg Gly His Cys Phe Cys Gln
 675 680 685
 Val Asp Ala Arg Val Trp Ala Pro Gly Asp Gly Gly Gln Gln Lys Glu
 690 695 700
 Pro Thr Glu Lys Thr Pro Pro Thr Pro Gln Pro Ser Cys Asn Gly Asp
 705 710 715 720
 Ser Asn Arg Thr Lys Asp Ile Lys Glu Glu Thr Pro Asp Ser Thr Glu
 725 730 735
 Ser Pro Ala Glu Asp Gly Ala Gly Arg Ser Pro Leu Pro Cys Pro Ser
 740 745 750
 Leu Cys Glu Leu Leu Ala Ser Thr Ala Val Lys Leu Cys Leu Gly His
 755 760 765
 Asp Arg Ile His Met Ala Phe Ala Pro Val Thr Pro Ala Leu Pro Ser
 770 775 780
 Asp Asp Arg Ile Thr Asn Ile Leu Asp Ser Ile Ile Ala Gln Val Val
 785 790 795 800
 Glu Arg Lys Ile Gln Glu Lys Ala Leu Gly Pro Gly Leu Arg Ala Gly
 805 810 815
 Ser Gly Leu Arg Lys Gly Leu Ser Leu Pro Leu Ser Pro Val Arg Thr
 820 825 830
 Arg Leu Ser Pro Pro Gly Ala Leu Leu Trp Leu Gln Glu Pro Arg Pro
 835 840 845
 Lys His Gly Phe His Leu Phe Gln Glu His Trp Arg Gln Gly Gln Pro
 850 855 860
 Val Leu Val Ser Gly Ile Gln Lys Thr Leu Arg Leu Ser Leu Trp Gly
 865 870 875 880
 Met Glu Ala Leu Gly Thr Leu Gly Gly Gln Val Gln Thr Leu Thr Ala
 885 890 895

Leu Gly Pro Pro Gln Pro Thr Asn Leu Asp Ser Thr Ala Phe Trp Glu
 900 905 910
 Gly Phe Ser His Pro Glu Thr Arg Pro Lys Leu Asp Glu Gly Ser Val
 915 920 925
 Leu Leu Leu His Arg Thr Leu Gly Asp Lys Asp Ala Ser Arg Val Gln
 930 935 940
 Asn Leu Ala Ser Ser Leu Pro Leu Pro Glu Tyr Cys Ala His Gln Gly
 945 950 955 960
 Lys Leu Asn Leu Ala Ser Tyr Leu Pro Leu Gly Leu Thr Leu His Pro
 965 970 975
 Leu Glu Pro Gln Leu Trp Ala Ala Tyr Gly Val Asn Ser His Arg Gly
 980 985 990
 His Leu Gly Thr Lys Asn Leu Cys Val Glu Val Ser Asp Leu Ile Ser
 995 1000 1005
 Ile Leu Val His Ala Glu Ala Gln Leu Pro Pro Trp Tyr Arg Ala Gln
 1010 1015 1020
 Lys Asp Phe Leu Ser Gly Leu Asp Gly Glu Gly Leu Trp Ser Pro Gly
 1025 1030 1035 1040
 Ser Gln Thr Ser Thr Val Trp His Val Phe Arg Ala Gln Asp Ala Gln
 1045 1050 1055
 Arg Ile Arg Arg Phe Leu Gln Met Val Cys Pro Ala Gly Ala Gly Thr
 1060 1065 1070
 Leu Glu Pro Gly Ala Pro Gly Ser Cys Tyr Leu Asp Ala Gly Leu Arg
 1075 1080 1085
 Arg Arg Leu Arg Glu Glu Trp Gly Val Ser Cys Trp Thr Leu Leu Gln
 1090 1095 1100
 Ala Pro Gly Glu Ala Val Leu Val Pro Ala Gly Ala Pro His Gln Val
 1105 1110 1115 1120
 Gln Gly Leu Val Ser Thr Ile Ser Val Thr Gln His Phe Leu Ser Pro
 1125 1130 1135
 Glu Thr Ser Ala Leu Ser Ala Gln Leu Tyr His Gln Gly Ala Ser Leu
 1140 1145 1150
 Pro Pro Asp His Arg Met Leu Tyr Ala Gln Met Asp Arg Ala Val Phe
 1155 1160 1165
 Gln Ala Val Lys Ala Ala Val Gly Ala Leu Gln Glu Ala Lys
 1170 1175 1180

<210> 7
 <211> 111
 <212> DNA
 <213> Rat

<400> 7

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agtcaggcca agctgccact aatccgggcg gggagagggg gggcaccac gtcagagcgg 60
ggactgccgg gtggagggca tctgaggaca tcccctcca ctcacgcggc c          111

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<210> 8
<211> 111
<212> DNA
<213> Mouse

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<400> 8
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ggactgccgg gtggagggca tctgaggaca tcccctcca ctcacgcagg c          111

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<210> 9
<211> 23
<212> DNA
<213> Rat

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<400> 9
ggtggagggc atctgaggac atc                                     23

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<210> 10
<211> 21
<212> DNA
<213> Rat

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<400> 10
tggagggcat ctgaggacat c                                     21

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